

**Remarks**

The Office Action mailed January 30, 2006 has been carefully reviewed and the foregoing amendments have been made in consequence thereof.

Claims 1-6, 8, 9, 11-17, 19, and 20 are now pending in this application. Claims 1-9, 11-17, 19, and 20 are rejected. Claims 7, 10, and 18 has been canceled. Claims 10 and 18 are objected to.

The rejection of Claims 6, 11, and 12 under 35 U.S.C. § 102(e) as being unpatentable over Hidalgo (U.S. Patent No. 6,843,638) is respectfully traversed.

Hidalgo describes a stator assembly (10) including a variable vane (12) and a linkage arm (14) that controls movement of the vane. The vane is mounted between a fixed shroud (42) and a fixed hub (18) such that, the vane can pivot about its radial axis as controlled by the linkage arm. Specifically, the vane is coupled to the shroud by a shroud button (26) that includes a tapered portion (28), a shoulder portion (30), and a neck down portion (34) extending therebetween. A clip (44) couples the neck down portion within the shroud. Notably, the clip does not extend through a bushing.

Claim 6 recites a variable vane assembly for a gas turbine engine including a casing, said variable vane assembly comprising "a variable vane comprising . . . radially inner and outer spindles configured to rotatably couple said vane within the gas turbine engine, at least one of said radially inner and radially outer spindles comprises at least one groove defined therein, said at least one groove comprising at least one machined face . . . a bushing extending circumferentially around at least a portion of said radially inner spindle . . . and a retainer for engaging said groove . . . at least a portion of said retainer extends through a portion of said bushing."

Hidalgo does not describe nor suggest a variable vane assembly for a gas turbine engine, as is recited in Claim 6. More specifically, Hidalgo does not describe nor suggest a variable vane including radially inner and outer spindles configured to rotatably couple the

vane within the gas turbine engine, at least one of the radially inner and radially outer spindles includes at least one groove defined therein, the at least one groove including at least one machined face, a bushing extending circumferentially around at least a portion of the radially inner spindle, wherein at least a portion of the retainer extends through a portion of the bushing. Rather, in contrast to the present invention, Hidalgo describes a vane coupled to shroud by a clip wherein the clip does not extend through a portion of a bushing. Accordingly, for at least the reasons set forth above, Claim 6 is submitted to be patentable over Hidalgo.

Claims 11 and 12 depend, directly or indirectly, from independent Claim 6. When the recitations of Claims 11 and 12 are considered in combination with the recitations of Claim 6, Applicants submit that dependent Claims 11 and 12 likewise are patentable over Hidalgo.

The rejection of Claims 1-9, 13-17, 19, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Agram (U.S. Patent No. 6,129,512) in view of Hidalgo is respectfully traversed.

Hidalgo is described above. Agram describes a vane assembly that includes an outer stator (1) and a row of vanes (2). Each vane includes an outer pivot (3) and an internal pivot (5) that is inserted into a bearing (6) retained in a connecting ring (7) extending circumferentially between vanes (2). Connecting ring includes a support ring (12) and a stiffening ring (13) including lips (19 and 20). Internal pivot (5) includes a trunnion (28) and a widened section (29). Trunnion (28) is inserted into a sleeve (27) defined within bearing (6) such that widened section (29) is between trunnion (28) and a blade (30) of vane (2). Widened section (29) includes a recess (34) defined therein. Notably, recess (34) does not extend circumferentially, but rather, as described at column 4, lines 2-6, "recess 34 advantageously lies only on a section of the circumference and finishes therefore in two lateral stopping surfaces (33) that limit the angular deflection of vane (2) by coming in contact lip (21)."

Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. Neither Agram nor Hidalgo, considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Agram with Hidalgo, because there is no motivation to combine the references suggested in the art. Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicants' own teaching. Rather, only the conclusory statement that it would have been obvious "to modify the retention arrangement of Agram by using a circumferentially extending groove and retainer with opposed arms taught by Hidalgo in order to securely retain and limit radial movement of the variable vane" suggests combining the disclosures.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such

reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is clearly based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Agram is cited for its teaching of a sleeve and a widened section including a recess defined therein and Hidalgo is merely cited for its teaching of a variable vane coupled to a shroud by a clip. Applicants respectfully disagree with the assertion in the Office Action that Agram describes a plurality of circumferentially spaced stem openings. Since there is no teaching or suggestion in the cited art for the combination, the Section 103 rejection is clearly based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection be withdrawn.

Moreover, if art "teaches away" from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited, as a whole, is not suggestive of the presently claimed invention. Moreover, Applicants respectfully submit that Agram teaches away from Hidalgo and the present invention, and as such, there is no suggestion or motivation to combine Hidalgo with Agram. Specifically, Agram teaches a recess that includes two lateral stopping surfaces within the same recess and configured to contact a singular lip and, in contrast to Agram and the present invention, Hidalgo describes a vane coupled to shroud by a clip wherein the clip does not extend through a portion of a bushing. Applicants respectfully submit that the singular lip described in Agram can not be modified into a two-pronged clip as described in Hidalgo. Moreover a stationary lip can not fairly be considered to be modified with a removable clip. Accordingly, Applicants respectfully submit that Agram actually teaches away from Hidalgo and the present invention.

Moreover, and to the extent understood, no combination of Agram or Hidalgo describes or suggests the claimed invention. Specifically, Claim 1 recites a method for assembling a variable vane assembly for a gas turbine engine including a casing and an inner

shroud, said method comprising "providing at least one variable vane including a radially inner spindle that includes a groove defined circumferentially therein that has at least one machined face . . . coupling a bushing around at least a portion of the variable vane radially inner spindle . . . and securing the variable vane to the inner shroud by engaging the spindle machined face with a retainer coupled to the inner shroud such that at least a portion of the retainer extends through a portion of the bushing."

Neither Agram nor Hidalgo considered alone or in combination, describe or suggest a method for assembling a variable vane assembly for a gas turbine engine as recited in Claim 1. Specifically, neither Agram nor Hidalgo, considered alone or in combination, describe or suggest providing at least one variable vane including a radially inner spindle that includes a groove defined circumferentially therein that has at least one machined face, coupling a bushing around at least a portion of the variable vane radially inner spindle, and securing the variable vane to the inner shroud by engaging the spindle machined face with a retainer coupled to the inner shroud such that at least a portion of the retainer extends through a portion of the bushing. Rather, in contrast to the present invention, Agram describes providing a recess that includes two lateral stopping surfaces within the same recess and configured to contact at singular lip, and Hidalgo describes a vane coupled to shroud by a clip wherein the clip does not extend through a portion of a bushing. Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Agram in view of Hidalgo.

Claims 2-5 depend from independent Claim 1. When the recitations of Claims 2-5 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-5 likewise are patentable over Agram in view of Hidalgo.

Claim 6 recites a variable vane assembly for a gas turbine engine including a casing, said variable vane assembly comprising "a variable vane comprising . . . radially inner and outer spindles configured to rotatably couple said vane within the gas turbine engine, at least one of said radially inner and radially outer spindles comprises at least one groove defined therein, said at least one groove comprising at least one machined face . . . a bushing

extending circumferentially around at least a portion of said radially inner spindle . . . and a retainer for engaging said groove . . . at least a portion of said retainer extends through a portion of said bushing.”

Neither Agram nor Hidalgo considered alone or in combination, describe or suggest a variable vane assembly for a gas turbine engine as recited in Claim 6. Specifically, neither Agram nor Hidalgo, considered alone or in combination, describe or suggest a variable vane including radially inner and outer spindles configured to rotatably couple the vane within the gas turbine engine, at least one of the radially inner and radially outer spindles includes at least one groove defined therein, the at least one groove including at least one machined face, a bushing extending circumferentially around at least a portion of the radially inner spindle, and a retainer for engaging the groove, wherein at least a portion of the retainer extends through a portion of the bushing. Rather, in contrast to the present invention, Agram describes providing a recess that includes two lateral stopping surfaces within the same recess and configured to contact at singular lip, and Hidalgo describes a vane coupled to shroud by a clip wherein the clip does not extend through a portion of a bushing. Accordingly, for at least the reasons set forth above, Claim 6 is submitted to be patentable over Agram in view of Hidalgo.

Claim 7 has been canceled. Claims 8, 9, and 13 depend from independent Claim 6. When the recitations of Claims 8, 9, and 13 are considered in combination with the recitations of Claim 6, Applicants submit that dependent Claims 8, 9, and 13 likewise are patentable over Agram in view of Hidalgo.

Claim 14 recites “a variable vane assembly comprising at least one row of circumferentially spaced variable vanes and a retainer assembly, said at least one row of variable vanes . . . each said variable vane comprising a radially inner spindle . . . and at least one bushing, each of said radially inner spindles comprises at least one groove defined therein and comprising at least one machined face, said at least one groove extends circumferentially within each of said radially inner spindles, said retainer assembly comprising at least one retainer for engaging each said spindle groove at least one machined

face to securely couple each said variable vane within said gas turbine engine, wherein at least a portion of said at least one retainer extends through said vane assembly at least one bushing . . . .”

Neither Agram nor Hidalgo considered alone or in combination, describe or suggest a variable vane assembly for a gas turbine engine as recited in Claim 6. Specifically, neither Agram nor, considered alone or in combination, describe or suggest a variable vane assembly including at least one row of circumferentially spaced variable vanes and a retainer assembly, each said variable vane comprising a radially inner spindle and at least one bushing, each of the radially inner spindles includes at least one groove defined therein and at least one machined face, the at least one groove extends circumferentially within each of the radially inner spindles. The retainer assembly includes at least one retainer for engaging each spindle groove at least one machined face to securely couple each of the variable vanes within the gas turbine engine, wherein at least a portion of the at least one retainer extends through the vane assembly at least one bushing. Rather, in contrast to the present invention, Agram describes providing a recess that includes two lateral stopping surfaces within the same recess and configured to contact at singular lip, and Hidalgo describes a vane coupled to shroud by a clip wherein the clip does not extend through a portion of a bushing. Accordingly, for at least the reasons set forth above, Claim 14 is submitted to be patentable over Agram in view of Hidalgo.

Claims 15-17, 19, and 20 depend from independent Claim 14. When the recitations of Claims 15-17, 19, and 20 are considered in combination with the recitations of Claim 14, Applicants submit that dependent Claims 15-17, 19, and 20 likewise are patentable over Agram in view of Hidalgo.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. § 103 rejection of Claims 1-9, 13-17, 19, and 20 be withdrawn.

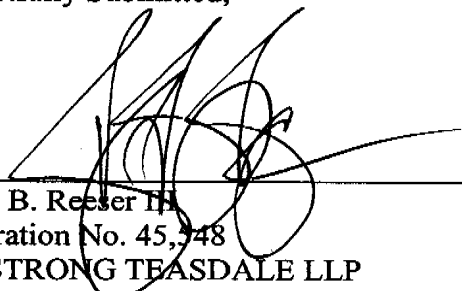
Claim 10 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 10 has been canceled and

independent Claim 6 has been amended to include the allowable subject matter of Claim 10. As such, Claim 6 is respectfully submitted to be in condition for allowance.

Claim 18 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 18 has been canceled and independent Claim 14 has been amended to include the allowable subject matter of Claim 18. As such, Claim 14 is respectfully submitted to be in condition for allowance.

In view of the foregoing remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'R. B. Reeser III', is written over a horizontal line. The signature is stylized with large, sweeping loops.

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